

of "Towards Situated Computing" by Hull et al. ("Hull"); and claims 56, 61-65, 100 and 101 under 35 U.S.C. § 103(a) as being unpatentable over Picard in view of U.S. Patent No. 5,878,274 to Kono et al. ("Kono"). Examiner Hailu also objected to claims 12-13, 21, 24-29, 40-46, 81, 87-88 and 94 as being dependent upon a rejected base claim, but indicated that these claims would be allowable if rewritten in independent form including all of the elements from the claims on which they depend.

This Preliminary Amendment cancels the claims objected-to in the parent application and addresses the rejections made by Examiner Hailu in the Office Action, as discussed in greater detail below. In particular, Applicants have amended claim 84 in order to clarify the subject matter of their invention, and have also canceled 12-13, 21, 24-29, 40-46, 81, 87-88 and 94. Thus, claims 1-11, 14-20, 22-23, 30-39, 47-80, 82-86, 89-93 and 95-101 are now pending.

Embodiments of the Present Invention

Embodiments of the present invention are directed to controlling presentation of information to a user based on the user's current condition. In particular, in some embodiments the user and the user's environment are monitored, and a model of the current condition of the user is created and maintained. The model of the current condition of the user can include a wide variety of information, including not only physical and emotional information about the user but also various mental characteristics of the user (*e.g.*, desires for how information should be presented, an amount of attention devoted to current activities, and interests in various types of information). Upon receiving output information to be presented to the user (*e.g.*, from an application program), an appropriate output device and an appropriate format with which to present the information to the user can be determined, and can then be used to present the output information. Various factors can be used when selecting an appropriate output device.

The Previously Applied Picard Reference

Picard is directed to an “affective wearable” computer system that attempts to recognize a user’s “affective patterns,” which are expressions of emotion such as anger, fear, and joy. The affective wearable includes various input sensors that allow a physiological state of the user to be monitored, such as sensors to detect user respiration, temperature, skin conductivity, blood volume pressure, heart rate, and muscular electrical activity. This physiological state information can then be used to match the physiological expression of an emotion. Other input sensors can also be included, such as a foot pressure sensor to indicate ambulatory movement and an audio detector that detects if the user is making any vocal sounds. After an emotional state is determined, it can be used in various ways, such as to determine how much current state information to record, to determine when to transmit information about the user to others, to filter email or a schedule, and to suggest musical selections. Picard describes the affective wearable as having a single output device (referred to as the “Private Eye display”) used to display data. (Picard, pgs. 1-4.)

While Picard discloses that a user’s emotional state can be determined, Picard does not discuss determining any other mental characteristics of the user. In addition, while Picard mentions the idea of “privacy,” there is no mention of the affective wearable automatically determining the privacy level (as opposed to the user explicitly specifying such a level). Indeed, automatically determining such a privacy level would be inconsistent with the teachings of Picard, which are directed to determining the emotional state of the user.

Analysis

In the Office Action dated March 20, 2001 in the parent application of this application, Examiner Hailu rejected all of the pending claims as being anticipated by or obvious in light of Picard, either alone or in combination with other references. However, the pending claims each include features not suggested or motivated by Picard

or the other cited references, and are thus patentable over those references. Therefore, Applicants respectfully disagree with the Examiner's rejection for at least the following reasons.

The pending claims recite various features lacking in the applied references. For example, the pending claims are directed to selecting an output device that is capable of presenting output information in accordance with a modeled property of the user. Moreover, at least some of the pending claims are directed to using additional factors in selecting an appropriate output device, such as selecting a user sense (e.g., touch or hearing) to which information will be presented. Some of the pending claims are also directed to opportunistically using remote output devices for information presentation while those remote output devices are accessible and perceivable by the user. Other pending claims recite various other additional features.

However, while Picard discloses that the determined user emotional state can be used in various ways, Picard does not teach or suggest that the emotional state is used to select or determine an appropriate output device for presenting output information to the user. Similarly, Picard makes no mention of selecting a user sense to which output information will be presented. Moreover, since Picard does not teach or suggest selecting an appropriate output device, it certainly does not discuss selecting an output device of another computer system to use for presenting output information to the user. The other cited references similarly do not discuss or suggest such features, and thus the pending claims are patentable over the cited references for at least these reasons.

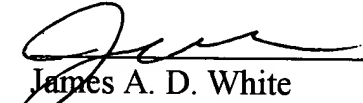
Conclusion

In light of the above remarks, Applicants respectfully submit that all of the pending claims are allowable. Applicants therefore respectfully request the Examiner to reconsider this application and timely allow all pending claims.

Moreover, if the Examiner decides to maintain the current rejections, Applicants request that the Examiner contact the Applicants' representative before the issuance of the next Office Action. Contact information for the Applicants'

representative is included at the end of the response. Similarly, the Examiner is encouraged to contact the Applicants' representative to discuss any other issues or distinctions between the claims and the applied references, if so desired.

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APPENDIX – CLAIMS
MARKED TO SHOW CHANGES

84. (Amended) A computer-readable medium containing instructions for presenting output information to a user by:

receiving information about [a] at least one modeled characteristic [property] of the user which affects appropriateness of presenting output information to the user;

selecting an output device capable of presenting the output information in accordance with the modeled user characteristic [property]; and

presenting the output information on the selected output device in accordance with the modeled user characteristic [property].